

STATE OF MAINE
BOARD OF ENVIRONMENTAL PROTECTION

ORIGINAL

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IN RE: PROPOSED CHAPTER 583: NUTRIENT
CRITERIA FOR FRESH SURFACE
WATERS

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PRESIDING OFFICER: SUSAN LESSARD, CHAIRMAN

This hearing was held pursuant to Notice at the
Augusta Civic Center, Civic Center Drive, Augusta
Maine, on June 18, 2009, beginning at 9:45 a.m.

1 (This hearing was held before the Board
2 of Environmental Protection, at the Augusta Civic
3 Center, Civic Center Drive, Augusta, Maine, on
4 June 18, 2009, beginning at 9:45 a.m.)

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6 CHAIRPERSON LESSARD: Okay, I'm going to
7 start this discussion. I haven't forgotten who I
8 am, but for the record, I'm going to go through
9 the whole introduction thing again. So good
10 morning, my name is Susan Lessard and I am the
11 Chair of the Board of Environmental Protection.
12 We are holding a public hearing today on the
13 Proposed Chapter 583, Nutrient Criteria for Fresh
14 Surface Waters. I will be the presiding officer
15 for today's hearing. Other Board members here
16 today are to my far right Wing Goodale, Lissa
17 Widoff, Andy Nixon, Don Guimond, Richard Gould,
18 our Assistant Attorney General Nancy Macirowski;
19 to my immediate left, Cindy Bertocci, our
20 executive analyst, Frank Woodard, Nancy Ziegler,
21 Matt Scott and Terry Hanson is currently our
22 administrative assistant and distributing
23 information to the Board. Also president is Tom
24 Danielson of DEP staff. Mr. Danielson is a member
25 of the Biological Monitoring Program and at the

1 conclusion of my remarks, Mr. Danielson will
2 introduce the proposed rule.

3 A written transcript of the hearing will be
4 prepared and the proceedings are being recorded
5 for that purpose by Joanne Alley of Alley &
6 Morrisette Reporting Service of Augusta. The
7 hearing is being conducted according to the
8 rulemaking requirements of the Maine
9 Administrative Procedures Act, Title 5, Maine
10 Revised Statutes Annotated, Sections 8051 through
11 8074. The proposed rule is authorized under Title
12 38, Sections 341-D (1-B) and 464(5).

13 Notice of today's hearing was published on
14 May 27th in the Bangor Daily News, the Kennebec
15 Journal, the Lewiston Daily Sun, the Portland
16 Press Herald, the Lewiston Sun Journal and
17 Waterville Morning Sentinel. Notice also was
18 mailed to trade associations and any person who
19 had previously filed a written request for notice
20 of DEP rulemaking. Copies of the proposed rule
21 and sign-in sheets are on the table by the door.
22 If you plan to speak and have not already done so,
23 please sign in now on the appropriate sheet.
24 There are separate sheets for those supporting the
25 proposed rule, those opposed and those neither for

1 nor against. Following Mr. Danielson's remarks, I
2 will call for testimony in that order, first, by
3 proponents, then by opponents and, lastly, by
4 those neither for nor against. To assist in the
5 recording of the testimony, I ask persons
6 testifying to stand at the -- or to sit at the
7 front table. We usually we have a podium, excuse
8 me. When you are called forward, please identify
9 yourself, state your address and give the name of
10 the organization you represent, if any. Speakers
11 are asked to remain at the table for questions, if
12 any, following their presentations. I will invite
13 questions first from Board members and then from
14 Department staff.

15 Written comments on the Proposed Chapter 583
16 may be submitted at today's hearing or following
17 the hearing until 5 p.m., Friday, July 31st,
18 2009. All written comments or testimony submitted
19 subsequent to the hearing should be addressed to
20 Tom Danielson at the DEP, 17 State House Station,
21 Augusta, Maine 04333-0017. Based on today's
22 testimony and written comments submitted before
23 the July 31st comment deadline, DEP staff will
24 prepare a final recommendation for consideration
25 by the Board at a future Board meeting to be

1 announced. Copies of the final staff
2 recommendation will be available upon request
3 before the rule is presented to the Board for
4 adoption, and if you wish to receive a copy,
5 please let Mr. Danielson know.

6 At this time I ask all persons intending to
7 testify to please stand to be sworn. If you would
8 raise your right hand, do you swear to tell the
9 whole truth and nothing but the truth?

10 **(Witnesses respond in affirmative.)**

11 CHAIRPERSON LESSARD: Thank you. Are there
12 any questions about the procedures I have
13 outlined? Seeing none, we will begin with an
14 overview of the proposed rule by Mr. Danielson.
15 Good morning.

16 MR. DANIELSON: Good morning. Again, I'm
17 Tom Danielson. I'm a biologist with the Maine
18 Department of Environmental Protection and the
19 Biological Monitoring Unit, and I'll be the one to
20 introduce Chapter 583 this morning.

21 I'd like to start by giving a brief
22 introduction to Maine's Water Classification
23 System. In the 1980s, the State Legislature
24 adopted the State's Water Classification System in
25 its current form, and it established one class for

1 lakes and ponds which is class GPA, and there are
2 four classes of rivers and streams, Class AA, A, B
3 and C. For purposes of most criteria and
4 designated uses, Classes A and AA are treated the
5 same. They have the same environmental
6 expectations and goals except Class AA waters have
7 some more restrictions on what allowed uses are in
8 the waterbody. For example, Class AA waters don't
9 allow dams. Those four classes have environmental
10 goals and those environmental goals we refer to as
11 designated uses such as recreation and the support
12 of aquatic life. The water quality standards also
13 include criteria which are the measuring sticks
14 that DEP uses to determine if the water quality
15 goals are being met.

16 Some of the criteria or narrative include
17 written statements in the rule such as the habitat
18 of Class A waters must be as naturally occurs and
19 other criteria are numeric, for example, in Class
20 A waters dissolved oxygen concentrations must be
21 greater than seven parts per million and for
22 narrative criteria the Department must use best
23 professional judgment to interpret data to
24 determine if narrative criteria are being
25 attained. If a waterbody is not attaining its

1 criteria, then it's called impaired and for many
2 of those waterbodies the Department must do a
3 total maximum daily load restoration plan, which
4 is a complicated process. As I mentioned earlier,
5 many of the criteria are tiered so they would have
6 different numeric limits for classes A, B and C.

7 Now, with nutrient criteria, in 1998 the
8 Environmental Protection Agency, the Federal U.S.
9 Environmental Protection Agency, which I'll refer
10 to as EPA from now on, introduced a strategy for
11 states to incorporate nutrient criteria into their
12 water quality standards. Now, although nutrients
13 are essential to all life, too much nutrients can
14 cause problems in lakes and rivers and streams
15 such as algal blooms, low dissolved oxygen
16 concentrations and fish kills, and unlike other
17 chemicals such as mercury or dioxin where too much
18 mercury or dioxin is never a good thing, in some
19 cases too much nutrients may or may not cause
20 negative environmental impacts because of other
21 factors such as shading or scouring.

22 Now, EPA declared that states must develop
23 their own nutrient criteria or that EPA would
24 impose its criteria upon the states, and one
25 reason why we are proposing Chapter 583 now is

1 that the EPA has started to do so. In January the
2 EPA declared that Florida's narrative nutrient
3 criteria were insufficient to maintain and support
4 water quality in Florida and is going to impose
5 its nutrient criteria on the state of Florida at
6 the end of the calendar year and now the state of
7 Florida is scrambling to develop its own criteria
8 before then so that it doesn't have to have EPA's
9 criteria. EPA's approach, which we don't want,
10 was to develop one-size-fits-all criteria and
11 their approach was to divide the country into
12 these nutrient regions and get all the data they
13 could gather for total phosphorus concentrations
14 in rivers and streams and lakes, line it up from
15 lowest to highest and one-quarter of the way up,
16 like the 25th percentile, is where they set the
17 criteria for total phosphorus, and DEP doesn't
18 like that approach for two reasons. First, it's a
19 one-size-fits-all approach which really doesn't
20 fit well with the tiered approach that we have
21 with multiple classes with different levels of
22 criteria for classes A, B and C. Second, they
23 would impose ambient or in-stream total phosphorus
24 concentrations or criteria that would function
25 alone without taking into account whether or not

1 there were documented environmental impacts or
2 not. If the concentration of phosphorus in a lake
3 or stream was too high, then there would be a
4 water quality impairment, again, regardless if
5 there's a negative environmental impact.

6 Nutrients, however, are different from other
7 chemicals such as dioxin and mercury. There are
8 many other factors, such as shading and scouring,
9 that can limit algal growth and prevent negative
10 environmental impacts even when there are abundant
11 nutrients.

12 So in Chapter 583, the Department took a
13 different approach from EPA in two main ways.
14 First, DEP did not use a one-size-fits-all
15 approach. We used a tiered use approach with
16 different concentrations and different
17 environmental expectations for Classes A, B and
18 C. Second, Chapter 583 establishes criteria for
19 total phosphorus and environmental response
20 criteria, and it is these environmental response
21 criteria that really determine whether or not
22 there is an impaired water quality.

23 Chapter 583 applies to all fresh surface
24 waters such as lakes, ponds, rivers, streams and
25 impoundments, and it includes a set of eight

1 environmental response criteria because of the
2 variety of waterbodies covered by the rule. Table
3 2 in the rule lists the environmental response
4 criteria and which waterbodies are appropriate for
5 their application. Three of the environmental
6 response criteria already exist in State Rule
7 including the pH, dissolved oxygen and aquatic
8 life criteria. Chapter 583 establishes five new
9 numeric criteria including water column
10 chlorophyll a concentrations, Secchi disk depth, a
11 diatom total phosphorus index, percent of
12 substrate covered by algae and patches of bacteria
13 and fungi. DEP already has the authority to use
14 these five criteria, in fact, we have used some of
15 them for decades, for example, the secchi disk
16 depth and chlorophyll a in lakes have been used
17 for decades. The Department views Chapter 583 as
18 an opportunity to formalize the use of these
19 criteria and make them official numeric criteria
20 so that the whole process of determining
21 attainment of water quality -- water quality
22 standards is transparent and predictable.

23 Table 3 in the rule, it's on page 8 of the
24 rule, it lists the numeric limits for the
25 environmental response criteria for the different

1 water quality classes, and I won't go into all of
2 those now, but I just wanted to point out where
3 those limits were located. Similar to the other
4 criteria, we grouped Class A and AA for purposes
5 of numeric criteria.

6 Chapter 583 also establishes total phosphorus
7 criteria for each class and these are included on
8 table 1 on page 6 of the rule. The total
9 phosphorus criterion for Class B is 15 parts per
10 billion because most lakes and ponds that have
11 concentrations below that do not have algal
12 blooms. The concentration for Class A and AA is
13 20 parts per billion. That's limit for Class A
14 and AA because we looked at streams that were
15 reference quality and had more than -- more than
16 95 percent of their watershed upstream where the
17 sample locations were forested and most of those
18 had concentrations less than 20 parts per
19 billion. For Class B, the total phosphorus limit
20 was set at 32 parts per billion because most
21 waterbodies that attain Class B aquatic lake
22 criteria have concentrations less than 32. The
23 criterion for Class C is 37 parts per billion and
24 that was to prevent nuisance algal growth or
25 filamentous algae on the bottom of rivers and

streams. Figure 1 also on page 6 in the rule outlines the decision framework that the Department uses for determining attainment of nutrient criteria. In the top two boxes, if all environmental response criteria that are measured in a waterbody meet the limits of the assigned class, then the Department will conclude that phosphorus did not cause an impairment of a use. If the phosphorus concentration is high, then the Department will likely look downstream to make sure that there are no problems downstream. In the bottom right-hand corner, box 4, if one or more environmental response criteria do not meet the limits of the assign class and the mean total phosphorus concentration is greater than the limit of the assigned class, then the Department will conclude that the phosphorus has caused or contributed to an impaired use, and in the bottom left box of figure 1, if one or more environmental response criteria do not meet the limits of the assigned class but the mean total phosphorus concentrations are okay, then there is an impaired use but the cause is indeterminate and indeterminate results require additional evaluation and use of best professional judgment

1 to make the final determination. The Department
2 will use a weight of evidence approach as outlined
3 in the rule to determine if total phosphorus or
4 another nutrient caused or contributed to the
5 impairment of a use. One of the potential
6 outcomes is to conduct additional sampling if
7 there is insufficient information to make a
8 determination. If a waterbody is found to be
9 impaired, then DEP would use a well-established
10 existing process for determining if additional
11 sampling is required or if sufficient information
12 exists to require a total maximum daily load
13 restoration plan. DEP could require phosphorus
14 discharge limits in permits for facilities that
15 would discharge effluent into impaired
16 waterbodies. Analysis of past data showed that
17 the nutrient criteria would not cause a large
18 increase in the amount of impaired waterbodies,
19 most of the waterbodies that would be listed as
20 impaired using the nutrient criteria are already
21 listed as impaired using other existing criteria.
22 Some of the potential new listings would require
23 additional sampling to confirm impairment and the
24 remaining potential new listings deserve to be
25 listed because of poor environmental conditions,

1 in fact, that is the purpose of Chapter 583 to
2 identify waterbodies that have poor environmental
3 conditions caused by nutrient enrichment that
4 would not otherwise be identified using existing
5 criteria.

6 So in summary, DEP has developed a rule that
7 establishes tiered nutrient criteria for different
8 water quality classes, unlike EPA's one-size-fits-
9 all approach, Chapter 583 establishes tiered
10 criteria that better fit Maine's approach of
11 managing water quality. Also unlike EPA's
12 approach that uses in-stream total phosphorus
13 concentrations alone to determine attainment of
14 nutrient criteria regardless of whether or not
15 there are negative environmental impacts, Chapter
16 583 uses a sweep of environmental response
17 criteria to first determine if there is an
18 impaired use and then uses the total phosphorus
19 criteria to determine if that impairment is caused
20 by phosphorus.

21 I'd like to point out in reviewing on the
22 Web site and I believe you also received a report
23 called Description of Nutrient Criteria for Fresh
24 Surface Waters, on page 7 of the report there were
25 two sentences -- the very last two sentences of

1 page 7 should have been removed during the process
2 of writing it, and I will be removing them and
3 will post a revised copy on the Web site. It
4 caused confusion that the two sentences mention
5 that DEP was not establishing total phosphorus
6 criteria and, indeed, we are establishing total
7 phosphorus criteria. The point is that we are not
8 using the total phosphorus criteria alone to
9 determine impairment of the water quality
10 standards and will be using the total phosphorus
11 in conjunction with the environmental response
12 criteria to determine impairment.

13 So any questions from the Board at this
14 time?

15 CHAIRPERSON LESSARD: Wing.

16 MR. GOODALE: Thank you. I believe at a
17 presentation you made to us you mentioned what the
18 EPA phosphorus limit is that they would put across
19 the state and was that 10 parts per billion?

20 MR. DANIELSON: Yes, I had it in here but I
21 must have skipped over it.

22 MR. GOODALE: Maybe you did mention it and
23 I missed it.

24 MR. DANIELSON: The EPA's approach is to --
25 would establish two numbers for the State of Maine

1 for rivers and streams. Most of the state the
2 number would be 10 parts per billion which is
3 really low. Many of our highest quality rivers
4 and streams would not attain that criterion, and
5 for the southern tip of Maine, that's the other
6 nutrient region, the total phosphorus criterion
7 for rivers and streams would be 24 parts per
8 billion.

9 MR. GOODALE: Thank you very much.

10 CHAIRPERSON LESSARD: Any other questions
11 for Mr. Danielson?

12 MR. SCOTT: Dan, in the EPA approach, I
13 guess it's sort of a follow-up to Wing's question
14 was but more detailed, in their process of trying
15 to do this nationwide and establishing the several
16 regions that they want to establish were they
17 doing nutrient criteria for other nutrients such
18 as nitrogen or carbon or other nutrient criteria?

19 MR. DANIELSON: Their initial work focused
20 on phosphorus, although EPA acknowledges and the
21 State of Maine also acknowledges that nitrogen can
22 be an important nutrient in many fresh waters.
23 The general rule of thumb in the past was that
24 phosphorus was a limiting nutrient in fresh waters
25 and nitrogen was a limiting nutrient in marine

1 waters, but there is an increasing body of
2 literature that shows that nitrogen can limit
3 growth of algae in fresh waters as well. The
4 State of Maine focused on phosphorus because we
5 have the most data for phosphorus, and we also
6 felt that by focusing on phosphorus we could solve
7 most of the problems because many of the ways to
8 reduce nutrients would reduce both.

9 MR. SCOTT: I'm sure that you had a number
10 of dialogs and discussions with EPA as far as this
11 process goes. Are they inclined to accept what
12 Maine might establish if it goes into more
13 detail?

14 MR. DANIELSON: Yes, we've consulted with
15 EPA, they've seen several previous drafts of the
16 rule and, in general, they're quite supportive of
17 our approach. They -- we followed -- some of the
18 methods we used for calculating some of the
19 environmental response limits were based on
20 recommendations from EPA. I think that they will
21 likely submit some testimony -- written testimony
22 about some specific numbers that they might think
23 are too high that they would like more stringent
24 numbers on a couple of the environmental
25 variables.

1 MR. SCOTT: Okay. In the -- historically
2 EPA has done a number of lake analyses across the
3 country, and I remember they were dealing with at
4 one time this alkalinity or calcium carbonate and
5 that was more or less due to air emission
6 activities, but Maine -- perhaps you folks thought
7 of this as you went through this process, Maine
8 probably could develop a -- as well as using other
9 kind of criteria in this process and I suspect you
10 and staff have had discussions in doing that.

11 MR. DANIELSON: Yes, we did discuss that.
12 Roy Bouchard and Linda Bacon are in the lakes unit
13 and could probably address that question better
14 than I could. I'm sorry, I can't get much more
15 detailed but there were some discussions about
16 that sort of topic.

17 MR. SCOTT: Is the audience hearing my
18 questions? My questions were follow-up regarding
19 EPA's activities and Maine's process in trying to
20 establish these. Another comment or question I
21 should ask Tom is in the lake section, I'm sure
22 that in establishing phosphorus criteria that they
23 must have evaluated this with respect to color and
24 perhaps total alkalinity, other nutrient criteria
25 that's involved that might interfere with a number

1 that you would come up with?

2 MR. DANIELSON: Yes, and I should have
3 mentioned that. There was a lot of discussion
4 about lakes and the chlorophyll a concentration of
5 the water and in some lakes where the water is tea
6 colored, it's stained by natural organic
7 compounds, that can interfere with the secchi disk
8 depth readings, and so in table 3 of the rule, for
9 colored lakes or stained lakes the Department
10 would do both the secchi disk depth measurements
11 and also the chlorophyll a concentration to
12 confirm that in the stained lakes that the secchi
13 low transparency was caused by algae and not by
14 some other factors like the staining. Similarly,
15 in impounded waterbodies where there might be
16 suspended sediment that might make the water look
17 cloudy that we would do both the secchi disk depth
18 and the chlorophyll a concentrations in impounded
19 waters as well to ensure that the low transparency
20 wasn't caused by something other than algal
21 growth.

22 MR. SCOTT: Another question, Tom, in the
23 process of developing this criteria, did you folks
24 conduct workshops with other user groups in Maine
25 during this process?

1 MR. DANIELSON: The overall process was
2 mostly within DEP; however, we did have many
3 presentations and other conferences and workshops
4 and then solicited comments during those
5 presentations.

6 MR. SCOTT: I suspect we're probably going
7 to hear from other party interests this morning,
8 and I thought I'd ask you whether the staff --
9 whether they conducted those kind of group
10 meetings, yeah.

11 MR. DANIELSON: So we did not have a formal
12 work group process for developing the numbers but
13 more of an informal process of getting --
14 presenting at various conferences or workshops or
15 meetings and then soliciting comments during those
16 opportunities.

17 MR. SCOTT: Thank you.

18 CHAIRPERSON LESSARD: Nancy.

19 MS. ZIEGLER: Would you explain in a little
20 bit more detail about how you're doing these
21 measurements in impoundments? Because it's
22 slightly different than in naturally occurring
23 lakes, and it seems like you're applying the same
24 criteria but then if you look at whether it's
25 classified as A, B or C, it's different. So I

1 just want to understand that. I'm looking at your
2 your report, the description on page 12 about it
3 and then table 3 which talks about it.

4 MR. DANIELSON: Yup, in lakes there's a
5 layer of -- the water can stratify based on
6 temperature and there's -- they generally go down
7 to where that layer of stratification is, and they
8 do a core sample. So they'll have a sampler
9 device that will go up through the water column
10 and collect water -- collect chlorophyll within
11 that whole region of water above that thermocline
12 and then will -- that will represent the sample,
13 so it's the average concentration within that
14 whole zone; and with impoundments, they're
15 generally more mixed, the water is more mixed than
16 you would find in a natural lake system, and so
17 you often don't get the same type of
18 stratification. So at an impoundment, they're
19 using a depth integrated photic zone. So they go
20 down I believe it's up to like 12 to 15 feet and
21 then they take a depth integrated core from that
22 point, so it's at where they would expect the
23 light to penetrate. So that's the main difference
24 in sampling.

25 MS. ZIEGLER: Thank you.

1 CHAIRPERSON LESSARD: Okay, any further
2 questions? We're working on the can't hear on
3 this side of the room issue. In the meantime,
4 we'll all eat our microphones and try to do
5 better.

6 MR. SCOTT: Just one last question, Madam
7 Chair. A couple of quick questions on the diatom
8 total phosphorus index. In those coefficients
9 that were generated in those tables of the diatom
10 taxa, I noticed that you've got coefficients for
11 some and others are blank. Is it just the species
12 that occur that you're finding in Maine waters?

13 MR. DANIELSON: The diatom total phosphorus
14 index was generated using a statistical method
15 called step wise selection process, and it
16 iteratively goes through and adds species to the
17 model based on how well it can -- the different
18 variables collectively will predict total
19 phosphorus. If they have a blank there, then they
20 -- I don't recall exactly, but I assume there was
21 also a nitrogen index and they probably have a
22 number in the nitrogen column. So I included all
23 the species in one table rather than having two
24 separate tables for the phosphorus index and the
25 nitrogen index. Only those taxa with numbers are

1 included in the respective index calculations.

2 MR. SCOTT: So that doesn't mean the other
3 taxa don't exist then?

4 MR. DANIELSON: Right, they could occur and
5 do occur.

6 MR. SCOTT: Thank you.

7 CHAIRPERSON LESSARD: Any further
8 questions? Thank you, Mr. Danielson.

9 MR. DANIELSON: Thank you.

10 CHAIRPERSON LESSARD: We'll move on to
11 testimony in support of this rule and the first
12 one is Chris Yoder. Make sure you keep the
13 microphone right in front of you.

14 MR. YODER: Good morning. My name is Chris
15 Yoder. I'm the research director at the Midwest
16 Biodiversity Institute, and I'm testifying in
17 support of Maine's nutrient criteria. Some
18 background on why I'm here. MBI is a
19 not-for-profit applied research organization
20 dedicated to advancing the science of bio
21 assessment and research on effects based water
22 quality standards development, and this has a
23 national application through funding from US EPA.

24 My prior experience was as a manager of the
25 Ohio EPA water quality standards and monitoring

1 assessment program for 25 years. After that I was
2 part of the -- I was a senior research associate
3 at the Ohio University Voinovich Center from 2001
4 to 2007. I was also affiliated with MBI serving
5 as the research director and I'm currently in that
6 position.

7 My connections to Maine are both personal
8 and professional. I was employed at the Chewonki
9 Foundation between 1969 and 1973, and then since
10 2001 I've been conducting a research on riverine
11 fish assemblages throughout Maine. We've sample
12 over 350 sites throughout Maine and have conducted
13 the analysis of that data, and that is currently
14 an ongoing project.

15 As I said before, our work at MBI is
16 dedicated to applied research with an emphasis on
17 water quality standards and advancing the state of
18 the science for standards and monitoring
19 assessment, particularly for state programs.
20 Since 1987, I have been part of several EPA
21 working groups on the concept of tiered aquatic
22 life uses and bio criteria. Tiered aquatic life
23 uses, TALU, that's an acronym that is out there
24 now, it's called the TALU approach. Since 2000 I
25 was on a working group sponsored by EPA to better

1 develop this approach. We produced a major
2 document in 2005 and highlighted in that document
3 were two state case examples, Maine and Ohio.
4 They are the leading TALU states in the nation.
5 So Maine is -- I've become acquainted with Maine's
6 program through that experience and have been
7 working with key staff as colleagues in that
8 process.

9 The Maine and Ohio water quality standards
10 exemplify what we call a TALU based approach to
11 water quality standards and monitoring
12 assessment. The key ingredients of these are
13 biologically based tiered aquatic life uses and
14 numeric bio criteria that are the arbiters of
15 attainment and nonattainment.

16 For the past eight years I have been working
17 with EPA and states to develop this process
18 better. We have developed a process to evaluate
19 the rigor of state programs and whether they are
20 ready to accept this challenge or not. If they
21 are not ready, we can offer to them suggestions on
22 how they might improve their programs and we have
23 done this in 22 states and three tribal
24 organizations. We also have a dedicated effort in
25 New England with all six New England states, again

1 sponsored by EPA, and Maine is a key member of
2 that group and is the model for this approach, and
3 Maine's program exhibits what we define as a high
4 level of rigor.

5 The TALU approach fosters setting effects
6 based criteria, expanding the sequence of stress
7 and exposure and ecosystem response in that
8 order. This is in contrast to a reliance on
9 indirect and mostly chemical surrogates that have
10 been the history of most state water quality
11 standards. Maine, like other states, has the
12 discretion to simply adopt EPA's national criteria
13 or develop their own more sophisticated approach.
14 The proposal before the Board is solidly effects
15 based and is a product of Maine's TALU based
16 approach to water quality standards and monitoring
17 assessment. The result is an inherently more
18 accurate and refined approach not only to water
19 quality standards but water quality management
20 outcomes upon which those are based.

21 As Tom Danielson pointed out, nutrients are
22 an essential part of aquatic ecosystems but they
23 can cause problems if there is too much, in
24 addition, excess nutrients frequently interact
25 with other factors such as temperature, flow and

1 habitat. As such, the phenomenon is complex and
2 requires the rigorous framework of not only
3 chemical criteria but physical and biological
4 effects based criteria in addition.

5 Maine's proposal accomplishes just that,
6 consisting of an appropriate mix of chemical,
7 physical and most importantly, biological response
8 criteria. It is an exemplary approach that again
9 emanates from the underlying framework of the
10 tiered aquatic life uses and bio criteria that are
11 in Maine's statute.

12 CHAIRPERSON LESSARD: Sir, we have a
13 reporter who is doing this. We have to speak so
14 she can get it down as well.

15 MR. YODER: I apologize. I apologize. As
16 I said before, this an exemplary approach that
17 again emanates from the underlying framework of
18 tiered aquatic life uses and bio criteria in
19 Maine's statute and the attendant expertise of the
20 DEP staff and management. The proposed rule is
21 detailed, key terms are defined and the criteria
22 are clearly stated and are based on empirical
23 information and their implementation is
24 explained. This represents what we believe is
25 state of the art in current water quality

1 standards, science and policy. Thank you.

2 CHAIRPERSON LESSARD: Thank you very much.
3 Wing.

4 MR. GOODALE: Thank you very much for your
5 testimony. I had a question. I was wondering if
6 you could provide your assessment of the total
7 phosphorus limits that are put forward in table 1
8 and just your interpretation of how those numbers
9 apply to these different classes, water classes.

10 MR. YODER: Well, my understanding is that
11 these are -- these are linked to the expectations
12 for each designated use tier. So they're
13 compatible with what would preserve or restore
14 attainment of the biologically based criteria and
15 the associated chemical and physical indicators
16 that are stated here. By comparison, I come from
17 the very nutrient rich Midwest and Ohio has
18 basically tiered nutrient criteria that are very
19 similar to this, but they are much higher in
20 concentration. Some are an order of magnitude
21 higher and that just owes to the inherently higher
22 background concentrations that are part of the
23 geology and in the soils of that area, and that's
24 also partly a reflection of 12 million people and
25 all the associated effects that that has as well.

1 So that has to be incorporated into it as well.
2 To me they seem very reasonable and, more
3 importantly, I think it's just the empirical basis
4 that they have that's based on real data, not --
5 EPA's national criteria are also based on real
6 data, but the spatial context of that database is
7 just way too large to be applying to a state and
8 have sufficient detail.

9 MR. GOODALE: Thank you very much.

10 CHAIRPERSON LESSARD: Any other questions?
11 Matt.

12 MR. SCOTT: Yes, Chris, thank you very much
13 for your comments and coming forward here and
14 supporting the staff, and many of the staff are
15 former employees of mine and I'm glad to hear
16 they're doing a good job. Now, my question for
17 you is since you're a former EPA manager is why --
18 what did Florida do wrong? They went through a
19 process and, I mean, you and I both know a number
20 of those researchers and scientists down in
21 Florida and I'm just curious what's happened down
22 there.

23 MR. YODER: Well, if you could help me out
24 on what -- through EPA, I am currently dealing
25 with that issue but my understanding is that it's

1 always a struggle over different perceptions of
2 what's required to restore waters, and my
3 understanding is a lot it is driven by trying to
4 restore Lake Okeechobee which will take -- the
5 expectation is that that will take a hundred years
6 to be achieved, and the other issue is Florida is
7 just literally comprised of marine sediments so
8 they are naturally high in phosphorus. So a lot
9 of the streams -- some streams, especially those
10 that are fed by the -- sort of the deep springs
11 are just naturally high in phosphorus. I mean,
12 there is phosphorus mining in Florida. That's
13 what the soil is made of. So that's always a
14 struggle when you have natural variability that is
15 accentuated as it is in Florida to try to apply
16 maybe what our belief is on what an individual
17 lake needs versus the remainder of the state. So
18 we're -- they would like to take a similar
19 approach to what Maine is taking where you do mix
20 in effects based indicators, biological
21 indicators, to cast some reality on when is a
22 chemical exceedance really significant. So we're
23 hopefully going to get that outcome, but I think
24 the other point is it's already into a legal
25 situation as well.

1 MR. SCOTT: All right. Thank you very much
2 for your comments, Chris. That's all that I have
3 for now, Madam Chair.

4 CHAIRPERSON LESSARD: Thank you very much.

5 MR. YODER: Thank you.

6 CHAIRPERSON LESSARD: We'll now move on to
7 those neither in support of nor in opposition to.
8 First we have Cara O'Donnell, Houlton Band of
9 Maliseet.

10 MS. O'DONNELL: Hello. My name is Cara
11 O'Donnell. I'm representing the Houlton Band of
12 Maliseet Indians, and I have provided a copy of my
13 testimony and it has photographs in it also. I've
14 worked as a water resource specialist for the
15 Tribe since 2003. In that time I've been working
16 on understanding the dynamic role of nutrients on
17 the chemistry and integrity of the Meduxnekeag
18 River System.

19 The Maliseets have strong ties to the
20 river. As a people who traditionally fish, hunt,
21 trap and gather in and around the land and waters
22 of the Meduxnekeag and St. John Rivers. Maliseets
23 call themselves Wolastoqewiyik, which means people
24 of the beautiful flowing river. The Maliseet
25 people chose to live on this land by the river

1 because it has sustained their ancestors for
2 generations. The river banks of the Meduxnekeag
3 still provide edible plants such fiddleheads and
4 muskrat root for traditional medicines. The river
5 provides a connection to traditional uses on the
6 river such as canoeing, fishing and swimming. It
7 provides steam for sweat lodges. In short,
8 Maliseet culture is largely dependent upon the
9 waters and natural resources found within the
10 river, the floodplains and the riparian zone along
11 the Meduxnekeag. It provides a critical link in
12 preserving cultural practices, traditions and
13 history. The Maliseets applaud the structure of
14 the proposed water quality standards for including
15 the environmental response variables, but do not
16 believe that the numeric values applied are
17 protective enough for Maine's waters. Nutrient
18 criteria proposed in Chapter 583 are not
19 representative of the sensitivity of Maine's
20 waters, particularly the Meduxnekeag, which is a
21 Class B river where nutrient enrichment is a
22 continuing issue. The following issues are our
23 concern. The standards proposed do not provide
24 protection for cultural, spiritual and traditional
25 designated uses of the Tribe. As I just

1 described, the survival of the culture depends
2 upon the ability to continue to practice these
3 traditions which are dependent on the waters of
4 the Meduxnekeag and the plants and animals that
5 survive in these waters. The Meduxnekeag
6 watershed must be protected so that we can ensure
7 that the Tribe can practice these traditions in
8 the future. It is evident by these pictures
9 provided that this kind of algae bloom, these
10 kinds of blooms that we observe can interfere with
11 tribal practices. These pictures were taken
12 adjacent to tribal lands on the Meduxnekeag River
13 and typically consist of long strands of
14 filamentous algae that can grow up to be much
15 longer than 30 feet in length. We believe that
16 the phosphorus limit is set too high. The
17 numerical limit proposed for total phosphorus will
18 not prevent algae blooms capable of disrupting
19 biological processes on the river system.
20 Nutrient concentrations are continually in flux
21 and are known to be readily absorbed from the
22 water, by the plants or the algae during an algae
23 bloom leaving the remaining concentration in the
24 water low. This makes it probable that you will
25 find low phosphorus concentrations during an algae

1 bloom so requiring high phosphorus levels
2 concurrent with the presence of the other
3 environmental response variables is incongruous.
4 If you look at the decision framework in figure 1,
5 Chapter 583, the Meduxnekeag River would be
6 labeled as impaired due to indeterminate cause and
7 the Tribe is concerned that this will undermine
8 the status of the Meduxnekeag River as nutrient
9 impaired by a 2000 TMDL study which was done by
10 Maine DEP. Despite efforts made by dischargers to
11 reduce loading to the river and despite the low
12 phosphorus numbers we actually do see blooms still
13 occur and dissolved oxygen impairment is still an
14 issue. Our question is will the new rule change
15 how the Maine DEP deals with impairment in the
16 Meduxnekeag River.

17 Also the environmental response variable
18 determined by the Maine DEP for percent coverage
19 of algae for Class B waters is set too high at 30
20 percent to protect our watershed. Our Water
21 Resources Program has focused on collecting
22 dissolved oxygen data as well as nutrient data
23 over the past ten years and has EPA approved data
24 displaying failure to meet Maine's Class B
25 standard for dissolved oxygen even when algae

1 coverage is less than 30 percent.

2 The nutrient criteria should include nitrogen
3 standards to cover situations in rivers where
4 nitrogen may play a key role in enrichment. The
5 EPA Technical Guidance Manual for developing
6 nutrient criteria states that phosphorus is the
7 key limiting nutrient controlling productivity and
8 causing excess algal biomass in many waters,
9 however, nitrogen can become important in waters
10 receiving agricultural runoff. The Meduxnekeag
11 and its tributaries are characterized by
12 agricultural land use adjacent to much of its
13 waters.

14 The Maliseets have extensive data on the
15 Meduxnekeag and conclude that Maine's proposed
16 nutrient criteria will not provide the protection
17 that it intends to our waters. We propose that
18 our watershed may not be an anomaly but may simply
19 have more data and be better understood and imply
20 that more data collection is needed to supply more
21 representative numbers. And our weather, our
22 average for total phosphorus is about 12 parts per
23 billion so that EPA recommended nutrient criteria
24 of 10 would be more suitable for protection for
25 us. Are there any questions?

1 CHAIRPERSON LESSARD: Matt.

2 MR. SCOTT: Yes, thank you, Madam Chair.
3 Cara, thank you for your presentation and your
4 testimony. I'd like to go to item 4 on page 2.
5 You mentioned the nitrogen standard. I'm curious
6 about that as well because, yes, I believe that
7 nitrogen is a critical nutrient criteria and
8 probably -- and based on the dual photographs that
9 you have on the second page, it looks like a lot
10 of filamentous algae has grown attached to those
11 rocks and I would suspect that the nitrogen may be
12 the limiting growth factor for that particular
13 algae. I don't know for sure but you seem to have
14 raised the comment there in item 4, and I
15 appreciate that. Now, I'm going to ask you this
16 question in particular for the Meduxnekeag. Are
17 there any direct dischargers to your knowledge
18 currently in that drainage or is it all non-point
19 source?

20 MS. O'DONNELL: There are two dischargers.
21 There's one starch factory and there's one
22 wastewater treatment plant.

23 MR. SCOTT: All right. Now, your data that
24 you collected, who has that been shared with?

25 MS. O'DONNELL: Much of it was shared with

1 the DEP. Some of it -- the majority of our
2 nutrient data is collected by the USGS, US
3 Geological Survey, and at this point it's not
4 public information. It hasn't been -- final
5 reports haven't been written and that kind of
6 thing so it's still raw data.

7 MR. SCOTT: Yeah, I'm familiar with those.
8 Thank you very much.

9 CHAIRPERSON LESSARD: Wing.

10 MR. GOODALE: In your last comment you
11 mentioned 10 parts per billion the EPA recommends
12 and I was gearing up to ask you a question on how
13 you felt these total phosphorus limits should be
14 changed. Do I interpret your testimony that it
15 should be changed to 10 parts per billion? Right
16 now for Class B it's 32. That's what's in the
17 proposed rule. Or is there a different change
18 that you'd like to see in general on this?

19 MS. O'DONNELL: Well, according to the
20 total phosphorus data that we have, the dry
21 weather average is approximately 12 parts per
22 billion and in order to be protective of a bloom
23 occurring, I would think the total phosphorus
24 might need to be just below that. 10 seems to be
25 more reasonable for the nature of our watershed.

1 So, yeah, that number seems to work better for
2 us.

3 MR. GOODALE: Thank you very much.

4 CHAIRPERSON LESSARD: Thank you. Oh, I'm
5 sorry, Don.

6 MR. GUIMOND: I'm a little bit familiar
7 with the area and I know in the last -- over the
8 last several years I know the Conservation
9 District and NRCS has done a lot work on the
10 Meduxnekeag watershed. Does your data indicate
11 any improvements over time?

12 MS. O'DONNELL: Well, let me think. I
13 guess I could address that more technically in the
14 written comments for you. Our data -- our
15 phosphorus data averages 10 and that goes back
16 from 2004 is the earliest data that we have
17 through 2008, and so I'm not sure how far back you
18 may be looking but there are practices going on
19 within the watershed to improve non-point sources
20 and also the dischargers do comply now with the
21 phosphorus discharge limit due to the TMDL in
22 2000; however, we are still seeing impairment and
23 we are still seeing blooms. Dissolved oxygen
24 still fails to meet Class B standards annually
25 throughout the watershed.

1 MR. GUIMOND: The photo on the last page
2 indicates 2001. Are you still seeing blooms to
3 this significant level eight years later?

4 MS. O'DONNELL: I did see one in the summer
5 I believe of 2007 that was maybe a quarter mile
6 long, yeah.

7 MR. GUIMOND: Thank you.

8 CHAIRPERSON LESSARD: Thank you very much.
9 Next we have Angie Reed.

10 MR. REED: My name is Angie Reed. I work
11 as the water resources planner for the Penobscot
12 Indian Nation. Just to be clear, I signed in as
13 neither opposed nor for just because this is
14 actually my first time testifying at this kind of
15 thing and so I'm not actually sure of the
16 definition and how it goes on record if I'm
17 opposed or not, so if I'm -- I would lean more
18 towards -- we're in favor of it but I didn't know
19 legally what that meant as what I was going on the
20 record for and so that's why I'm in this section.

21 I'm here to represent the Penobscot Nation's
22 water resources program. I have actually worked
23 for them since 2004. I got my undergraduate
24 degree in water resources management at University
25 of New Hampshire, master's degree at Colorado

1 State in aquatic ecology and since then for about
2 11 years I've been working for tribes, both
3 individual tribes and on a national basis
4 developing water quality management programs.

5 So as you know, you have a written copy of
6 this testimony. I'm just going to hit the high
7 points. We'll also be submitting written comments
8 as well. Much like many folks here, we consider,
9 and the Maliseets as well, we consider DEP a
10 colleague in this work. We've actually worked
11 closely with them on a lot of projects on the
12 Penobscot River. Primarily some of the more
13 specific ones are the waste load studies, which
14 they're officially called, to develop Penobscot
15 River data models so they're pretty intensive
16 three-day studies. There have been at least three
17 that I know we've been involved in and actually
18 team leaders on a majority of the teams. So we
19 also for I think almost 20 years now have had an
20 agreement with DEP to give them our water quality
21 monitoring data which they use in their reports to
22 Congress, their 305(b) reports to Congress.

23 We're in favor of them enacting freshwater
24 water quality standards for nutrients; however,
25 because of the, you know -- not however -- in

1 addition to that because of the voluntary
2 approaches that have been attempted in the
3 Penobscot River watershed to resolve nutrient
4 problems and our version of blooms in the river
5 have not worked, we really do feel that an
6 appropriate version of nutrient criteria actually
7 must be adopted, mind you, also monitored for and
8 enforced. So while we want this to happen, we
9 actually have a couple of major issues and then
10 some specific questions about the criteria.

11 So the first issue, and I'm just going to
12 read this so I make sure it's clearly in these
13 words. Instream total phosphorus criteria will
14 not protect water quality in the Penobscot River
15 and will allow cyanobacteria blooms to continue.
16 This is our concern. In the region -- this is
17 where it's easier for me to have a copy, if you
18 look at figure 2, figure 1 gives you some spatial
19 context for Dolby Pond is, where one of the mills
20 that's been causing problems in Dolby Pond is and
21 then where Indian Island and other areas relevant
22 are, but figure 2 describes just the bloom in 2007
23 and I want to be specific here because we just
24 heard from the Maliseets about filamentous algae
25 attached to the bottom. That's not what we're

1 talking about. We're talking about phytoplankton
2 or organisms that photosynthesize that are
3 floating around in the water column. So we have
4 blooms, too high of concentrations of growth of
5 these things in our waters. So you can look at
6 this, I'm not going to go over it in detail. Like
7 I said, I'm going to hit the high points. The
8 bottom line is the bottom, right-hand corner box
9 that says under the current proposal, much like
10 the Maliseets said, these conditions would be
11 considered impaired but an indeterminate cause;
12 however, as you see in the box right above it,
13 Katahdin Paper was issued a notice of violation
14 from DEP stating that the Department believes the
15 primary cause of these problems is excess
16 phosphorus discharges. So who knows what would
17 have happened if that had not been seen as the
18 problem and the phosphorus discharge was minimized
19 or reduced. It could have been worse. We realize
20 that there are worse conditions on other rivers in
21 the state but our primary focus is on the
22 Penobscot so that the center of culture and tribal
23 health is sustained. This is not the first time
24 we've seen this. These blooms have been
25 increasing in severity over the past 15 years.

1 The first extreme bloom happened in 2001 and
2 then there were two more in 2004 and 2007. During
3 each of these, these have been raised as issues
4 with DEP. Furthermore, they've switched in
5 species from greens and browns algae officially to
6 more blue-green algae but these are really not
7 officially an algae. They're cyanobacteria or
8 bacteria, so they're called cyano, hence the name
9 for blue-green. They also can and do, but we
10 don't always know when, produce toxins similar to
11 those found in the red tides that shut down
12 shellfish beds just for some context. DEP
13 describes actually cyanobacteria toxins as, quote,
14 damage -- they can damage livers and nervous
15 systems of many animals including people. What
16 they didn't mention is that in addition they can
17 be and have been fatal to non-human animals. Most
18 people don't ingest enough toxin, that's the
19 assumption, to have a problem. The World Health
20 Organization, however, suggests that if there are
21 10 micrograms per liter more of chlorophyll a with
22 a dominance of cyanobacteria that there should be
23 risk advisories posted on sites. As you can see
24 on the same figure 2, chlorophyll a was well above
25 10 micrograms per liter and in samples that

1 Penobscot Nation collected and paid to have
2 identified and actually analyzed for toxins 88
3 percent of all the cells counted were potentially
4 toxic cyanobacterial. Penobscot Nation Water
5 Resources Program chose to post health advisories
6 in many locations where community members use the
7 river and we also sent out written notice to
8 people. No advisories were posted for non-native
9 folks. Furthermore, the numbers you see here were
10 actually collected those waste load application
11 studies that I mentioned. They're averages.
12 Averages in the water column as Tom Danielson
13 talked about, you don't actually -- you take an
14 integrated column of water as opposed to some at
15 the surface or some below the surface. So they
16 don't represent what are considered surface scums
17 of algae. On August 16, 2007, in the Weldon Dam
18 Impoundment, one of these integrated samples from
19 the water column produced a chlorophyll a
20 concentration of 23 micrograms per liter. The
21 next day a sample taken on the surface focused
22 specifically on taking a surface scum sample,
23 that's why we did it, near the same Weldon Dam,
24 which is frankly the more likely place for people
25 to become exposed to these scums on the edge where

1 they might be swimming, that produced a
2 chlorophyll a concentration of 77 micrograms per
3 liter. WHO describes scums as being able to,
4 quote, rapidly change the risk from moderate to
5 high. They also state that monitoring scums every
6 one or two weeks makes it pretty unlikely to
7 detect hazardous levels of toxins. It's very
8 difficult to know where to sample for toxins and
9 when they're producing toxins. It can vary quite
10 a bit, furthermore, we had 75 miles worth of river
11 to assess.

12 The 2007 bloom was not even as severe as the
13 ones we experienced in 2004 and 2001. Late
14 afternoons as we got to late August, the
15 afternoons around Indian Island had this really
16 intense musty smell because of all the
17 cyanobacteria around the island and, frankly, even
18 if people avoided the scums, the bloom made the
19 river much less desirable to use. Unfortunately
20 these blooms happen coincidentally around
21 Community Days on Indian Island. They're kind of
22 generally three-day events where the Tribe gets
23 together, families and friends, and they come on
24 the island and they do lots of different
25 activities, several of which involve the river.

1 One of the community members in 2007 during the
2 bloom, he and his father went fishing on the Lemon
3 Island, Sugar Island section and it was pretty
4 apparent, the fishing was pretty lousy and they
5 had to change their plans and not go back because
6 it was bad. So they changed their use of the
7 river as a result of the bloom. Also at this time
8 we actually got lots of calls both from community
9 members and non-community members. We have a
10 tendency to be the first person that even
11 non-native folks call in the community when
12 there's a problem on the river. So we got lots of
13 calls about the bloom in 2007, and as figure 2
14 states, the same as the problem in 2004 and 2001,
15 the 2007 bloom was the result of one direct source
16 of phosphorus discharge 75 miles up river from
17 where it eventually reached.

18 So the second major issue we have is simply
19 that the percent of substrate covered by algal
20 growth and the diatom total phosphorus index are
21 really not going to be useful indicators of
22 impairment in a large river like the Penobscot.
23 Deep water and swift current really don't make it
24 possible to sample like this in our river and
25 we're not -- we don't feel that the shoreline

1 samples will be representative enough to
2 adequately characterize a large river.

3 I'm just going to read these. I know that
4 they're in the written testimony, but I want to
5 make sure that these get addressed because lots of
6 people have brought up some more things. We have
7 some specific questions that we'd like to see
8 addressed and answered. Will the new rules
9 supersede any prior rulings made to reduce
10 phosphorus discharges in the Penobscot? What is
11 the specific monitoring schedule that will ensure
12 that these criteria are being met? Will DEP be
13 working with Penobscot Nation on monitoring
14 efforts? Because there are no good methods to
15 assess long-term phosphorus concentrations in
16 large rivers, are there plans for monitoring
17 nutrients with in-situ continuous monitoring
18 equipment in areas where there are known threats?
19 How are the spatial means calculated for
20 chlorophyll a values in impounded areas? And
21 would it be appropriate to include measurements
22 from Dolby Pond in this calculation? Why does
23 this rule not at all distinguish between blooms
24 that are completely or at least predominantly
25 comprised of cyanobacteria and those that are not?

1 Will DEP ever treat cyanobacteria blooms with
2 stricter regulations in this rule? What is the
3 mechanism for alerting a public health official
4 when there are cyanobacteria blooms as significant
5 as the Penobscot River and people experienced in
6 2001, 2004 and 2007? What are other states doing
7 regarding the presence of cyanobacteria blooms in
8 rivers and notifying the public about them? Has
9 there been any sampling done to assess,
10 concurrently, phosphorus and chlorophyll a
11 concentrations in streams and rivers from each
12 water quality classification? If so, what does
13 this tell us about instream phosphorus
14 concentrations, their pattern over a summer, and
15 the concomitant chlorophyll a concentrations?

16 So I'm just going to close by taking a step
17 back from this technical stuff and saying --
18 reminding everybody that after more than 10,000
19 years, Penobscot People continue to proudly share
20 the name of the river that is at the center of
21 their culture. Community members use the
22 reservation land and waters for many things,
23 including burial and ceremonial sites, hunting,
24 harvesting fiddleheads, fishing, trapping,
25 gathering, boating, camping, sweat lodges and

1 other ceremonies. Because the reservation land
2 and waters include everything north of and
3 including Indian Island, which you can see on the
4 map, they are affected by many cumulative impacts
5 of many sources of pollution from upstream. Legal
6 sustenance fishing rights have been protected
7 through treaties with Massachusetts and Maine and
8 the Water Resources Program exists to protect the
9 health of the Penobscot River which in turn helps
10 to protect the health of the community members
11 using the river and their right to do so. That's
12 why I'm here today representing Penobscot Nation
13 and the Penobscot River.

14 We thank you for the opportunity to
15 participate in the forum and provide our
16 comments. We sincerely hope that you will
17 consider these comments and all this information
18 in the deliberation. Any questions?

19 CHAIRPERSON LESSARD: Matt.

20 MR. SCOTT: Yes, thank you, Angie. Have
21 you had any dialogue with the staff regarding
22 these questions that you've raised here, these ten
23 questions in your testimony you submitted?

24 MS. REED: This specific version of the
25 questions? No, but we have -- a couple of

1 things. We are in consultation with EPA as well
2 about this, but we've had, I mean, multiple
3 conversations about the bloom problems in the
4 river. We did -- Tom invited us to come down to a
5 presentation at NRCM back in April, we came and we
6 talked about it, we raised -- once again, I don't
7 think I put them in exactly these words, but we
8 definitely raised these questions. We talked
9 about what are we going to do about cyanobacteria
10 blooms. We didn't specifically say the questions
11 but we definitely brought up the issues in
12 different words. This has been a conservation for
13 15 years. I mean, I've only been there since 2004
14 but Dan tells me that back in 2001 when the waste
15 load study was done, it was pretty clear that
16 there was just too much phosphorus going in and
17 the 2000 waste load study kind of set the model
18 out of whack because it couldn't calibrate it to
19 that. It didn't predict those values and there's
20 no way they could incorporate the data in to make
21 it predict those values. So the issue of blooms
22 has been ongoing for a long time. So does that
23 answer your question?

24 MR. SCOTT: Well, yes, and I just want to
25 point out that as a Board we're conducting a

1 hearing and we're asking for testimony. We can't
2 answer questions, but the testimony that you
3 presented here would allow the staff to respond to
4 these questions. Thank you.

5 CHAIRPERSON LESSARD: Thank you very much.
6 William Ball.

7 MR. BALL: Madam Chair, how's that?

8 CHAIRPERSON LESSARD: As long as everyone
9 can hear, we're fine.

10 MR. BALL: Madam Chair, Members of the
11 Board, good morning. My name is William Ball,
12 B-A-L-L, I am the president of Akron. We are an
13 engineering and environmental consulting firm. Our
14 main office is located in Newport, Maine. I thank
15 you for the opportunity to present you with my
16 comments or to provide comments on this draft
17 regulation this morning. We are in the process of
18 developing extensive written comments on this
19 draft that will be submitted to you. I have
20 picked three issues this morning to go over with
21 you or to discuss that I hope are of interest to
22 the Board.

23 My first comment is that the Department
24 appears to be rushing this major new rule through
25 the administrative process without adequate

1 opportunity for public comment, peer review,
2 stakeholder input and financial analysis.
3 Experience has proven I think that a well-executed
4 stakeholder process adds value and improves the
5 quality of the regulations that are adopted by
6 this Board and for some reason that I don't
7 understand, this regulation has not been subject
8 to what has become a tradition at least of major
9 rulemaking being subjected to a stakeholder
10 process. The potentially affected parties deserve
11 an opportunity to understand if and how they might
12 be affected by these new standards. The new
13 standards in 583 have the potential to impact many
14 point and non-point sources of wastewater and
15 stormwater. These entities deserve an opportunity
16 to be heard if these new standards will apply to
17 them. The primary issue that we have is that many
18 people simply don't know if these new standards
19 will in some way affect them or not. Chapter 583
20 represents a substantial change from the narrative
21 standards that currently are used to regulate
22 nutrients in the State of Maine. The narrative
23 standards have flexibility, the numeric standards
24 do not. It is very important that these new
25 standards be correct, and that's our primary

1 point. A stakeholder review process would help in
2 our opinion to accomplish that.

3 My second point is that Chapter 583 could
4 have a substantive economic impact on point and
5 non-point source dischargers to rivers and streams
6 in Maine. Nowhere does the Department address the
7 potential impact of this regulation, and given
8 that the Meduxnekeag River has already been a
9 subject of testimony this morning, I have a chart
10 that I would like to share with you because we
11 have represented one of the two dischargers on the
12 Meduxnekeag River who, due to the imposition of
13 the narrative standards that are currently in
14 Maine law and regulation regarding nutrients, one
15 of those dischargers, the Houlton Water Company,
16 was required to implement phosphorus treatment at
17 their wastewater treatment plant in Houlton that
18 discharges to the Meduxnekeag River, and I have a
19 chart that I would like to show you that
20 demonstrates what the cost of nutrient treatment
21 has been to the Houlton Water Company. Now, this
22 is a small community wastewater treatment
23 facility. Summertime flows are in the range of
24 250,000 gallons a day to give you an idea of how
25 small this actually is. This chart, and I will

1 turn it around for the audience in a moment, this
2 chart depicts the chemical and sludge disposal
3 costs that have been incurred by the Houlton Water
4 District from 1999 to 2008, and this is merely
5 presented to you today to demonstrate how
6 imposition of these regulations can have an impact
7 upon some of the very small communities and
8 wastewater treatment facilities in the State of
9 Maine.

10 MS. WIDOFF: Can you please just say what
11 the X and Y axes are? I can't see the details. I
12 see a trend but I don't know what it's trending.

13 MR. BALL: I'm sorry, could you say that
14 again please?

15 MS. WIDOFF: Can you please tell me what
16 the X and Y axes are on the chart?

17 MR. BALL: Yes, I can. May I?

18 CHAIRPERSON LESSARD: As long as you don't
19 talk because if you walk away from the microphone
20 we're not going to get you recorded.

21 MS. WIDOFF: I don't know if that's total
22 dollars, if that's per capita and how I interpret
23 that will affect --

24 MR. BALL: Now I understand your question.
25 What this is on the X axis is time and years and

1 the bars represent the total cost of chemicals and
2 sludge disposal only.

3 MS. WIDOFF: So it's total dollars and not
4 per capita?

5 MR. BALL: So in 1999 the total cost of
6 chemicals and sludge disposal were in the range of
7 \$50,000. In 2008, they had increased to \$180,000
8 and you can see how it -- this is about the year
9 that they implemented the phosphorus treatment
10 system in Houlton. Should I turn it around?

11 MR. NIXON: How many customers does the
12 Houlton Water Company have?

13 MR. BALL: Oh, wow.

14 MS. WIDOFF: And I think the reason for the
15 question and I don't mean -- it's similar to
16 yours, it's sort of is this total dollars or per
17 capita, and, you know, I will evaluate it
18 differently with that.

19 MR. BALL: The portion of their total
20 budget is about 400 and some odd thousand,
21 \$500,000 a year. So this represents a very
22 significant portion of the total budget to run and
23 operate their wastewater treatment plant now. It
24 didn't use to but it does today.

25 CHAIRPERSON LESSARD: As part of the

1 written testimony that you submit I think we could
2 clarify this if you give a historical perspective
3 for customer base in 1999, customer base in 2008,
4 that that will give the Board a way to measure
5 this information.

6 MR. BALL: I can assure you that the
7 customer base in Houlton, Maine, has not changed
8 in this time frame.

9 CHAIRPERSON LESSARD: Just asking for
10 clarification.

11 MR. BALL: Very good.

12 MR. WOODARD: Bill, are you saying it
13 hasn't decreased?

14 MR. BALL: I'm sorry, Frank?

15 MR. WOODARD: Are you saying that the
16 customer base has not decreased?

17 MR. BALL: It hasn't changed much.

18 MR. WOODARD: That's good. Does it make
19 any sense to divide 250,000 by 100 to get a handle
20 of how many people, 100 gallons per person per
21 day? Is Houlton way out of that range?

22 MR. BALL: I have a number of somewhere in
23 the 400s is their customer base households.

24 MR. WOODARD: Okay.

25 MR. BALL: But I can't remember exactly

1 what it is.

2 MS. ZIEGLER: Can I just ask one quick
3 question which is, this treatment that was
4 required by the water district is that as a
5 response to the TMDL that was done?

6 MR. BALL: That is correct. As a matter of
7 fact, it is in direct response to the photographs
8 that -- I haven't seen Cara's photographs today
9 but I think I know what they show, and this
10 treatment system that was put in was in direct
11 response to that situation and as a result of the
12 TMDL that was conducted on the Meduxnekeag.

13 MS. ZIEGLER: Okay.

14 MR. SCOTT: Have you finished, Bill? I'll
15 ask my questions at the end then. I don't want to
16 interrupt.

17 CHAIRPERSON LESSARD: Are you ready for
18 questions now? Is that the end of your
19 presentation?

20 MR. BALL: No, it's not. Oh, no. The
21 third point that I would like to make this morning
22 is that in my opinion the Department has so far
23 not adequately explained the technical and
24 scientific basis for the standards and criteria
25 that are proposed in 583 and I'm going to go

1 through just a very brief discussion of a few of
2 the parameters that are covered within this draft
3 regulation to give you some examples. The first
4 parameter that I would like to discuss is
5 chlorophyll a. This regulation essentially uses
6 existing standards for GPA waters, in other words,
7 the lakes and ponds which are the GPA waters of
8 the state and is applying those standards to the
9 rivers and streams. Existing regulations define
10 an algae bloom in the lakes as a secchi disk
11 reading of less than two meters. That regulation
12 has been around for a long time. The Department
13 has used secchi disk data from lakes to try to
14 prove a correlation between secchi disk and
15 chlorophyll A. I urge you to take a careful look
16 at the chart on page 12 of the description
17 document prepared by the Department and tell me if
18 you think there is a correlation that you can see
19 between secchi disk and chlorophyll a. We've
20 looked at that data very carefully and we don't
21 find the same correlation that the Department is
22 attempting to present in that document. What they
23 should do in our opinion is only use data from
24 rivers, streams and riverine impoundments that are
25 not lakes in developing these criteria. This

1 regulation effectively means that rivers, streams
2 and impoundments have to meet the same standards
3 as lakes. The reality is that we have three
4 different classifications for rivers. Those
5 classifications are A, B and C. The chlorophyll
6 standard for A, B and C -- for B and C rivers is
7 the same as it is for GPA lakes, and I'm not at
8 all certain that that's appropriate. There may be
9 a big difference. This may be an overly rigorous
10 standard for the lakes and rivers of the State of
11 Maine to meet.

12 The second parameter I'd like to talk about
13 briefly is total phosphorus and the issue of total
14 phosphorus and ortho phosphorus. As simply as I
15 can -- I'm going to simplify a lot of the
16 chemistry in my remarks this morning, so forgive
17 me for that, but we'll see where it goes. Simply
18 put, there are two major types of phosphorus that
19 are included in the term total phosphorus. Those
20 two types are organic phosphorus and inorganic
21 phosphorus. Inorganic phosphorus is also referred
22 to as ortho phosphorus and ortho phosphorus is
23 essentially that material -- that form of
24 phosphorus that you have in fertilizer. It comes
25 primarily from Florida. The phosphate mines in

1 Florida I think provide 85 percent of the ortho
2 phosphate that is then made into various types of
3 other chemicals and fertilizers that are used in
4 this country. The critical issue to this
5 discussion is that plants can only utilize the
6 ortho phosphorus fraction of total phosphorus.
7 Plants cannot absorb into their cell structure
8 organic phosphorus. Total phosphorus is an
9 extremely important parameter when discussing the
10 environment of lakes because organic phosphorus
11 can be converted back to inorganic phosphorus or
12 ortho phosphorus through biological decomposition
13 of the organic material in the sediments of large
14 lakes. That conversion process does not take
15 place in rivers and streams and smaller riverine
16 impoundments because it takes too long for that
17 conversion process to occur to convert the
18 inorganic phosphorus back to the inorganic form;
19 therefore, in our opinion, the ortho phosphorus is
20 the real parameter of concern in rivers, streams
21 and impoundments. Nutrient standards for rivers,
22 streams and impoundments should be based on the
23 ortho phosphorus parameter or the inorganic
24 phosphorus, whichever way you want to call it, and
25 not on the more coarse parameter of total

1 phosphorus. Data that we have shows that total
2 phosphorus levels in rivers and streams can be
3 elevated well above the standards that are set
4 forth in 583 simply by the introduction of organic
5 material by over land runoff that flushes organic
6 material into the rivers and streams. Data shows
7 that the ortho phosphorus levels do not track the
8 total phosphorus levels because the soils in Maine
9 are very, very low in inorganic phosphorus unlike
10 other states as others have already testified.
11 Total phosphorus is in our opinion the correct
12 parameter to be regulated for GPA waters. It is
13 not the correct parameter to be regulated in Class
14 A, B and C rivers streams and impoundments in the
15 State of Maine.

16 The last parameter that I would like to
17 discuss briefly is the diatom total phosphorus
18 index and the percent coverage by algae parameter
19 that is presented in this regulation. These two
20 parameters are both new water quality parameters
21 in Maine. They have been used by the Department
22 but they have not been subject to a regulatory
23 standard prior to this regulation. The regulated
24 community has no experience with these two
25 parameters and, therefore, has no way of knowing

1 if the numerical standards are reasonable or not.
2 These new standards should not be included as a
3 regulatory threshold until the Department has
4 shown which rivers and streams meet the standard
5 and which do not. Then and only then can the
6 parties affected by this regulation be expected to
7 comment on the validity of the numeric standards.
8 The Department should show us what 30 percent and
9 40 percent algae coverage looks like. Then the
10 Board and those affected by the regulations could
11 decide if the standard is reasonable or not.
12 Otherwise we only have one opinion. The diatom
13 total phosphorus index is virtually impossible to
14 understand at this point in time because the
15 Department has the only key to the process of
16 measuring diatom total phosphorus index, just like
17 the models for bio monitoring that were developed
18 by the Department, the only copy of the diatom
19 index model is in the hands of the Department. If
20 I want to know the index number for a stream near
21 me or one of my clients, the only way to find out
22 is to ask the Department. I cannot do the test
23 myself and find out on my own. We have struggled
24 for years to get the working copy of the bio
25 monitoring model from the Department and the

1 Department has simply not made it available. Some
2 of us outside of the Department assume that they
3 have potentially something to hide, otherwise they
4 would make this entire model available for use by
5 us and other members of the public.

6 In conclusion, this regulation deserves a
7 much higher level of public scrutiny before it is
8 adopted. The simple fact is that regulations in
9 Maine are virtually impossible to change after
10 they have been adopted. We get one shot to make
11 as good -- to make this regulation as good as it
12 can be. It needs to strike a balance between
13 protecting Maine waters from excessive nutrient
14 degradation and cost to society. I recommend that
15 this regulation be remanded back to the
16 Department, a comprehensive stakeholder process
17 should be undertaken, the Department should hold
18 meetings around the state with data from local
19 streams and rivers to show which waters of the
20 state will meet the standards and which do not.
21 Stakeholders to be adversely affected by this new
22 standard deserve an opportunity to stand before
23 the Board and express their concerns.

24 Thank you for the opportunity to express my
25 views. I'll take questions.

1 CHAIRPERSON LESSARD: Nancy.

2 MS. ZIEGLER: Have there been any
3 stakeholder groups convened to discuss this? I
4 wasn't clear if you were just saying it wasn't a
5 comprehensive process or there was no process.

6 MR. BALL: I believe the testimony we heard
7 earlier from the Department is that there have not
8 been stakeholder -- a stakeholder process, that
9 this regulation has been subjected to exposure in
10 conferences and to people but not a true
11 stakeholder process in the State of Maine.

12 MS. ZIEGLER: Thank you.

13 CHAIRPERSON LESSARD: Matt.

14 MR. SCOTT: Yes, Bill, you heard my
15 questioning this morning of the staff and other
16 people regarding the stakeholder activity.

17 MR. BALL: I'm afraid I didn't, Matt, I
18 couldn't hear you. Just getting old, Matt.

19 MR. SCOTT: Oh, you didn't hear me, okay.
20 Well, I did raise that question to Tom Danielson
21 at the beginning because there is a concern here.
22 I think perhaps there may be other factors that's
23 moving this forward as far as EPA is concerned,
24 however, based on what you said and what others
25 have said, do you think that a dialogue could be

1 established and an educational process to
2 understand some of the statistical analyses and
3 development of coefficients would be maybe
4 accepted and understood and the stakeholders would
5 be greatly satisfied by having this process? Do
6 you think that that would satisfy a lot of
7 concern?

8 MR. BALL: My experience is, Matt, that the
9 Department has been -- in other stakeholder
10 processes has been excellent in identifying
11 potentially affected parties and inviting a
12 cross-section of those interested parties to a
13 stakeholder process, and I have always found it to
14 be excellent in terms of the results that come
15 from that process. I don't always get what I
16 want, but it improves the product.

17 MR. SCOTT: Thank you very much, Bill.

18 CHAIRPERSON LESSARD: Thank you very much.
19 We still have three more people who wish to
20 testify. We really need to get this hearing
21 wrapped up by 11:30. We have a very full slate.
22 I would encourage anyone to please submit written
23 testimony in any amount of detail because that and
24 some very technical discussions is the best way
25 for the Board to review and analyze it's

1 information. If we can also see some of this
2 pretty detailed stuff in writing it's also helpful
3 to us. So next we have someone whose name I can't
4 read from the MPPA, Michael Barden, excuse me.

5 MR. BARDEN: Sorry, Chairman Lessard,
6 sometimes my writing is not so great. My name is
7 Mike Barden. I'm here on behalf of Maine Pulp and
8 Paper Association. We're a trade association
9 located in Augusta and we represent the pulp and
10 paper mills in the State of Maine who all would
11 have wastewater discharges and would be impacted
12 by this rule. So we generally support the concept
13 of doing sort of a weight of evidence approach.
14 We do have some concerns with how some of the
15 environmental indicator criteria were developed.
16 We also believe that the process has been kind of
17 short-circuited here. We understand that there
18 could be some legal issues for that over what's
19 going on with US EPA in Florida but our concern is
20 that we were -- we were informed and shown the
21 draft rule in sort of an introductory meeting to
22 this rule on April 24th or something like that.
23 The Department had already committed to post this
24 rule when we met with them on the 24th to get a
25 presentation of the draft rules, so on the 24th

1 was the first time we saw this rule, and it's the
2 first time we saw the decision criterion document
3 which forms a lot of the basis behind some of the
4 derivation of the numbers. So our concern is that
5 we agree with Mr. Ball and some of the other
6 commenters here that I think it would have
7 benefitted significantly from having sort of a
8 give and take so that we could understand how some
9 of these numbers were derived because we have some
10 questions with some of the statistical analysis
11 that were used. So, for example, when they
12 developed the numeric criteria for total
13 phosphorus for Class A streams they used the 90th
14 percentile. EPA recommends the 75th percentile
15 when they use reference streams. They used the
16 75th percentile for Class B and C but there's
17 really not a lot of justification or rationale for
18 why they use 90 percent in one instance and 75 in
19 other instance, and on the 75th percentile for the
20 Class B and C streams, then they used this
21 probability analysis to adjust the Class C number
22 downward. That probability analysis is pretty
23 somewhat controversial and there's a science
24 advisory board that EPA has put together to take a
25 look at the nutrient criteria and that's one of

1 the issues they're going to take a look at is this
2 probability analysis. So we believe there are
3 some questions on -- it may be okay, it may not be
4 okay, but I think there's going to be a federal
5 process that's going to take a look at that
6 because if DEP would have used the 75th percentile
7 for Class B, it would be about 50 parts per
8 billion instead of being downward adjusted to
9 something like 37, and then they seem to be
10 somewhat arbitrary in the percent of algae cover
11 that they used to adjust that. In that
12 probability analysis they selected 40 percent. If
13 they would have selected 50 percent, that would
14 have come out to about 50, so it would have been
15 very close to the 75th percentile. So those are
16 some of the questions I think we could have
17 probably fleshed out a little more through a
18 process that we could understand before it goes to
19 a formal rulemaking. As Mr. Ball indicated, when
20 you're in a formal rulemaking you're a lot more
21 confined in terms of how you can do give and take
22 and the Department is going to have to draft a
23 pretty lengthy basis statement because we're going
24 to have significant technical comments on this
25 rule.

1 Sort of the last thing that I would make
2 sure that you're aware of, this whole issue about
3 the weight of evidence approach we believe is
4 acceptable and is the right way to go forward, but
5 if EPA rejects that in Florida, we're stuck with a
6 single numeric criteria for total phosphorus in
7 the State of Maine, and these numbers are fairly
8 stringent and there will be stream segments that
9 will not meet those standards that are not
10 impaired in any way by nutrients. So does that
11 mean that facilities are going to have to put on
12 tertiary treatment like Houlton did? And in a
13 mill complex to do tertiary treatment at
14 35,000,000 gallons per day facilities, that's
15 going to be a significant economic impact to mills
16 because not only are they going to have to
17 purchase all these chemicals to take out the
18 nutrients but it's going to affect their sludge
19 disposal costs. Many of the mills now basically
20 have dewatering and they use the sludge as an
21 alternative fuel in their biomass boilers. When
22 you start treating your wastewater treatment plant
23 with fara chloride, that impacts the ability to
24 dewater sludge and that sludge will not be able to
25 be burned. It will go to the landfills. So we're

1 really concerned about some of the economic
2 impacts of this if we're not developing criteria
3 that are going to treat a problem. We cannot
4 afford to do tertiary treatment for nutrients just
5 for the sake of doing tertiary treatment. We need
6 to be doing tertiary treatment to solve problems
7 and that's why we think the weight of evidence
8 approach sort of gets us to that point, whether
9 we're satisfied that they're looking at something
10 like seven or eight environmental indicators plus
11 the numeric criteria for phosphorus, so the way we
12 read this is if you trip two, you trip the total
13 phosphorus number and you trip on environmental
14 indicator, you're in an impairment situation, is
15 that truly a weight of evidence approach. We'd
16 maybe like to see a more robust analysis, maybe
17 looking at two or three different environmental
18 indicators but, again, I think that's something we
19 probably could have discussed a little bit more
20 through a formal stakeholder process before they
21 came forward with the rules.

22 With that, I'd be happy to answer any
23 questions.

24 CHAIRPERSON LESSARD: Wing and then Dick.

25 MR. GOODALE: Thank you very much. Having

1 not been through a stakeholder process myself, I'm
2 not sure how long that would take and maybe it has
3 to do with how much disagreement or agreement
4 there is, but because of the time sensitive nature
5 of this, do you think it's realistic that the
6 State of Maine could go through a -- if the Board
7 were to remand it back to the Department, could
8 they go through a stakeholder process and then go
9 through a formal rulemaking fairly swiftly or do
10 you see something that's going to require more
11 science and is going to be a much more lengthy
12 process?

13 MR. BARDEN: Yeah, that's a hard one to
14 say. I don't think it would slow it down
15 significantly. I mean, they have, and we
16 appreciate it by the way, sort of an extended
17 written comment period, usually I think the
18 comment periods run for about 30 days after a
19 public hearing, but they are extending it to July
20 31st so that does provide some flexibility, but,
21 you know, I think now that you've had a chance to
22 see this description document and actually what's
23 proposed in the rule, I think probably one
24 meeting, maybe one or two meetings, could probably
25 at least make sure we understand all the

1 statistics and have input into that process on how
2 we derive. So I don't know how much it would slow
3 it down, and I really don't know what kind of time
4 frame they're under in terms of Florida. I mean
5 clearly we do not want a federal solution to
6 Maine's phosphorus standards. I mean, this needs
7 to be a state process, but I'm just not sure
8 what's going to be the legal issues that come out
9 of the case in Florida.

10 MR. GOODALE: I understand. Thank you.

11 CHAIRPERSON LESSARD: Dick.

12 MR. GOULD: I just wanted to know, you said
13 MPPA is going to give us written comments?

14 MR. BARDEN: We are, yes, absolutely.

15 CHAIRPERSON LESSARD: Yes, Lissa.

16 MS. WIDOFF: It's sort of a general
17 question in digesting the different kinds of input
18 through public comments today and in some
19 instances folks are requesting maybe sort of finer
20 scale criteria to address some very sort of river
21 specific concerns and then the other end of the
22 spectrum is sort of generalizing a bit more but
23 having a better sense of the scientific
24 justification so that there's the least economic
25 impact, and obviously any such stakeholder

1 meeting, if it were to occur, would really be the
2 place where these diverging approaches and
3 concerns would play out in a greater level of
4 detail. With that in mind, what areas of sort of
5 additional detail filtering and screening or
6 analysis of nutrient criteria would the paper
7 industry anticipate putting on the table or
8 considering? Because what I'm hearing is sort of
9 we've got to understand the scientific background
10 and because of the economic impact, we're
11 interested in the general approach but, you know,
12 the push may be more towards the generalized, yet
13 at the same time there may be pressures for a more
14 fine scale to come out of it. So I'm just
15 wondering, you know, what you could imagine sort
16 of being willing to discuss that is on a more
17 detailed level.

18 MR. BARDEN: Yeah, I think as Mr. Ball
19 indicated our key issues are with some of the
20 statistics behind the derivation of the criteria
21 that they've used for the environmental
22 indicators. I think that's the real issue. So, I
23 mean, I think Mr. Ball sort of outlined pretty
24 carefully sort of what some of these key issues
25 are. We do have some issues with use of

1 chlorophyll a as 8 that applies to rivers and
2 streams because we felt that that's way too
3 stringent.

4 MS. WIDOFF: Thank you.

5 CHAIRPERSON LESSARD: Thank you very much.
6 John Cronin.

7 MR. CRONIN: Thank you very much. Members
8 of the Board, my name is John Cronin. I'm an
9 environmental engineer for NewPage Corporation's
10 Rumford mill. I'm testifying today to express our
11 concerns with the draft nutrient rule. In
12 summary, I'm concerned that there's not been
13 enough time or opportunity for the regulated
14 community, technical experts and stakeholders to
15 provide input to this draft rule. As a result,
16 I'm concerned that the specific nutrient criteria
17 as well as the specific environmental response
18 criteria may not be correct. As you know, the
19 Rumford mill is located on the Androscoggin
20 River. Our facility, as well as other
21 manufacturing and hydro facilities on the river,
22 were involved in a wastewater permit renewal
23 process and TMDL development that took five years
24 to complete and an additional two years to resolve
25 through the appeal process. The Board presided

1 over much of this seven-year-long process. As
2 Board members may remember, regulation of
3 nutrients and prevention of algae blooms was a key
4 aspect of this process. The end result included
5 strict wastewater license limitations for
6 phosphorus for facilities on this river. As a
7 result of the reduction of nutrient discharges on
8 the river, I'm pleased to share with you that
9 there have been no algae blooms on Gulf Island
10 Pond.

11 The Rumford mill wastewater permit contains
12 limits for phosphorus discharges that are among
13 the strictest of any pulp and paper mill in the
14 country. My concern is that despite the strict
15 limitations in our permit and the fact that there
16 have been no algae blooms, the Rumford mill still
17 may not comply with the nutrient criteria and
18 environmental response criteria in this rule at
19 all times. This could result in nonattainment and
20 additional reductions from the mill. Any further
21 reductions from the mill cannot be achieved
22 without costly installation of additional
23 equipment.

24 I ask the Board what benefit will additional
25 reductions in phosphorus provide when algae blooms

1 have been eliminated? This is a very difficult
2 issue to reconcile after just completing a
3 seven-years-long permitting process. Again, five
4 years in the permitting process, two years in the
5 appeal process, we currently have strict limits in
6 place already. We're well in compliance with
7 those permit limits. We've eliminated algae
8 blooms on Gulf Island Pond and we still may not be
9 in compliance with the limits with this rule. We
10 also have fundamental concerns about the numerical
11 value selected for total phosphorus as well as the
12 chlorophyll a and percent substrate values
13 included in the environmental response criteria.
14 We ask that the Board and Department take a step
15 back before proceeding with this rule and do
16 further work to ensure that the correct regulatory
17 criteria are selected and to allow an opportunity
18 for public comments and review.

19 And with that, I'll be happy to answer any
20 questions you may have.

21 CHAIRPERSON LESSARD: Thank you very much.
22 And make sure that you have -- oh, I'm sorry,
23 Nancy.

24 MS. ZIEGLER: Do you feel that slowing the
25 process down a little bit to at least have some

1 stakeholder meetings would be useful?

2 MR. CRONIN: Yes, I do.

3 CHAIRPERSON LESSARD: Thank you. Make sure
4 and submit your comments that you made in writing
5 as well.

6 MR. CRONIN: Yes, thank you.

7 CHAIRPERSON LESSARD: Kirsten Hebert.

8 MS. HEBERT: Good morning. That means I'm
9 last, huh?

10 CHAIRPERSON LESSARD: No, we have one
11 more.

12 MS. HEBERT: Oh, good. There's a lot of
13 pressure being last. My name is Kirsten Hebert.
14 I'm the deputy executive director of the Maine
15 Rural Water Association. Our association provides
16 technical assistance and training for water
17 utilities, wastewater utilities throughout the
18 state. So of our membership, we have
19 approximately 100 to 125 wastewater members, many
20 of which do not yet know about this rule. They do
21 not know about the potential impacts of this rule,
22 let alone that the rule even exists, and I will
23 echo the comments that you have heard before in
24 terms of please slow this process down such that
25 our members have the opportunity to see the rule,

1 think about the rule and figure out how it's going
2 to impact them or whether it's going to impact
3 them. It may not. They may be fine.

4 Some of the issues -- our association has been
5 through many a stakeholder process, most recently
6 we did the Chapter 587 water withdrawal rules, and
7 while that was a rather lengthy process, it was a
8 complicated process, a lot of different opinions,
9 a lot of different utilities and different
10 utilities needed different things out of that rule
11 as well as adding in conservation interests and
12 DEP interests; but in the end, we all got
13 something out of that rule. While we didn't all
14 walk away an absolute winner, that this is
15 definitely what we went in wanting, we came out
16 with that we had worked as hard as we could on
17 that rule, and when we left, we knew it was going
18 to be the best that it could be for everybody that
19 was in that room.

20 We would really like to see that process
21 again. I don't feel that under this particular
22 proposed rule the stakeholder process needs to be
23 nearly as long or nearly as complex. Give us an
24 overview of the rule, talk to us about the
25 information, the data that you have for each river

1 as well as for the permit holders on the river,
2 just give us more information, put us in a good
3 place so that we know what we're looking at.

4 One of the things that has been happening
5 recently within the utility community is that
6 you've got aging infrastructure as well as you've
7 got loss of residential customers and you've got a
8 lot of loss of commercial and industrial
9 customers. We are getting phone calls on a
10 regular basis to do rate cases on the water side.
11 Most of those rate cases are starting out at
12 increases of 60 percent or more. You guys all
13 know this is not a good time to be asking your
14 ratepayers, your taxpayers for 60 percent more.
15 So let's put something in place that makes sense,
16 something in place that's necessary, not something
17 that's done just for the sake of pushing a rule
18 through.

19 There was a question asked earlier about
20 Houlton and the number of wastewater payors and
21 they said they had 1,700 customers on the
22 wastewater side. So with that, I'm happy to take
23 any questions you've got. I will be submitting
24 substantive comments on the proposed rule itself
25 as opposed to just my very general comments

1 today.

2 CHAIRPERSON LESSARD: Any questions? Thank
3 you very much.

4 MS. HEBERT: You're welcome.

5 CHAIRPERSON LESSARD: And we have one more,
6 Diane Serco.

7 MS. SERCO: Dionno.

8 CHAIRPERSON LESSARD: Oh, I'm sorry.

9 MR. SERCO: That's okay, I'm very used to
10 it by now. Good morning, Chair Lessard, other
11 Members of the Board, my name is Dionno Serco, I'm
12 with the Natural Resources Council of Maine. I'm
13 here today speaking for Nick Bennett who
14 apologizes for not being here, he's in New
15 Brunswick today at meetings so he couldn't be
16 here. I have the dubious honor of being the
17 person standing between you and lunch so I'll be
18 very quick.

19 CHAIRPERSON LESSARD: No, we have a lot
20 more before lunch.

21 MR. SERCO: Oh, okay, all right, then
22 somebody else gets that honor then, that's good.
23 I'll be pretty brief. You have a copy of the
24 comments in your hands. NRCM recognizes the huge
25 amount of work DEP has put into the proposed

1 nutrient criteria over many years. We also
2 appreciate DEP reaching out to meet with us and
3 other stakeholders prior to this meeting; however,
4 NRCM still has a great deal of concern regarding
5 these proposed rules and will be submitting more
6 detailed written comments to this effect.

7 First and foremost, Maine's large river
8 systems generally show signs of nutrient stress
9 and DEP has already stated publicly that nutrient
10 levels need to be reduced. DEP has indicated high
11 levels of concern, for example, with nutrient
12 levels in the Penobscot, the Kennebec,
13 Androscoggin, Aroostook, Med -- I'm going to say
14 that word wrong, Meduxnekeag, thank you, I was
15 practicing it out here and I still couldn't get it
16 right. As you can see, most of my work is in the
17 North Woods and a little less in the lower side
18 and Merry Meeting Bay.

19 How will these criteria contribute to
20 reducing nutrient levels in these river systems,
21 if at all? If these criteria tell us that action
22 is not required on these river systems, would DEP
23 change its previous position that action is
24 necessary? More specifically, NRCM has concerns,
25 there are three general concerns here. The first

1 concern is the total phosphorus limits seem very
2 high. For most of Maine, US EPA recommends 10
3 parts per billion as a criterion for total
4 phosphorus, even DEP's criteria for A and AA
5 streams are twice as high. In addition, in 2004 a
6 major bloom occurred in Gulf Island Pond on the
7 Androscoggin River, as I'm sure you all are
8 aware. At that time the average total phosphorus
9 concentration in Gulf Island Pond for that summer
10 was 33 parts per billion, less than the phosphorus
11 criterion of 37 parts per billion DEP is proposing
12 for Class C rivers. Thus, even though there was a
13 major algae bloom that DEP believed was due to
14 point source phosphorus discharges, the new total
15 phosphorus criteria would have resulted in a
16 determination of impaired intermediate cause which
17 you've heard much about earlier.

18 NRCM also understands that water quality
19 experts from the Houlton Band of Maliseets and the
20 Penobscot Indian Nation which you've already heard
21 from will submit testimony expressing similar
22 concerns about total phosphorus limits because
23 algae blooms that DEP has attributed to point
24 source nutrient discharges on the Meduxnekeag and
25 the Penobscot occurred at total phosphorus levels

1 below the criteria DEP is proposing in Chapter
2 583.

3 Two more points to make, one, NRCM, and
4 you've heard a little bit about this from others
5 as well and I'm sorry if I'm repeating that, NRCM
6 is not familiar with the diatom total phosphorus
7 index. We understand that DEP has developed this
8 index on its own and clearly this represents a lot
9 of work on DEP's part; however, NRCM is not
10 certain how useful this index will be in
11 regulating nutrient inputs into Maine rivers and
12 streams. DEP needs to provide more explanation as
13 to why it is confident this index will work and
14 what it tells us about our waters.

15 And, finally, NRCM is also unfamiliar with
16 the percent algae cover indicator. We have
17 concerns about how reasonably this could be
18 implemented in a large river, how well could one
19 sample over -- how well could one sample over very
20 large areas. In addition, percent algae cover
21 might be more determined by the availability of
22 suitable bottom habitat than nutrient
23 concentrations, thus, if bottom habitat were not
24 conducive to algal growth in an area, percent
25 algal cover might be low enough even if nutrient

1 concentrations are high.

2 In closing, these criteria are complex and
3 NRCM will need time to evaluate them more fully.
4 We plan to submit more detailed comments on July
5 30th. We also recommend that BEP ask DEP to
6 provide some real-world case studies on how these
7 criteria would apply to systems where we already
8 know there are nutrient problems. If the criteria
9 were to say consistently that there is no nutrient
10 problems on rivers where DEP has believed there is
11 such a problem for many years, it would be a cause
12 of great concern for us.

13 Thank you for the opportunity to comment on
14 this important issue, and I apologize for not
15 being as articulate as Nick but I'm happy to
16 answer any questions that you may have, and if I
17 can't answer them, I will make sure Nick gets
18 them.

19 CHAIRPERSON LESSARD: Matt.

20 MR. SCOTT: Yes, thank you Mr. Serco. I
21 assume based on your testimony you provided to us
22 that you, too, would support a stakeholders' group
23 meeting of some kind?

24 MR. SERCO: I don't think I can speak to
25 that. I think I would leave that for Nick. I'm

1 going to stick to what's on paper I think.

2 MR. SCOTT: So perhaps -- have you ever
3 participated in stakeholders' meetings?

4 MR. SERCO: I have participated in
5 stakeholder meetings through other agencies, yes,
6 not through DEP or BEP.

7 MR. SCOTT: All right. Well, perhaps we'll
8 hear from you in the written comments then.

9 MR. SERCO: Yes, I will make sure that Nick
10 addresses that in the written comments.

11 CHAIRPERSON LESSARD: Thank you very much.

12 MR. SERCO: Thank you.

13 CHAIRPERSON LESSARD: Seeing no -- having
14 no one else on our list, I will declare the public
15 hearing closed and encourage anyone who has
16 written testimony to please get it in by 5 p.m.,
17 on July 30th. Thank you.

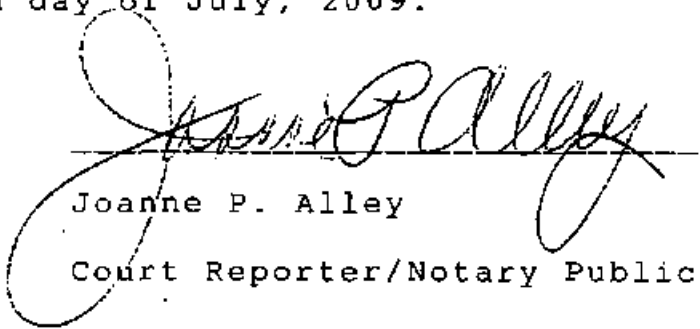
18 (Whereupon, the above-named hearing was concluded
19 at 11:38 a.m.)
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CERTIFICATE

I, Joanne P. Alley, a Notary Public in and for the State of Maine, hereby certify that on the 18th day of June, 2009, personally appeared before me the within-named witnesses who were sworn to testify to the truth, the whole truth, and nothing but the truth in the aforementioned cause of action and that the foregoing is a true and accurate record as taken by me by means of computer-aided machine shorthand.

I further certify that I am a disinterested person, in the event or outcome of the aforementioned cause of action.

IN WITNESS WHEREOF, I have hereunto set my hand this 10th day of July, 2009.



Joanne P. Alley

Court Reporter/Notary Public

My commission expires: July 17, 2015